

REMARKS / ARGUMENTS

The Examiner has objected to the claim amendments and specifically has asserted that the terms “holder joint” and “ground joint” are not found within the Specification. Applicants respectfully traverse, and assert that these joints are disclosed in the Specification and shown in the drawings. As a result, Applicants have amended the claims to merely refer to these joints with labels of first, second, third, etc.

Applicants hereby repeat arguments presented in the previous response with the labels “holder” and “ground” replaced with the new labels from the claims as appropriate.

I. AMENDMENTS TO THE SPECIFICATION

To have a more definite and clearly defined invention, Applicant has amended the written specification. No new subject matter has been introduced by these amendments.

II. AMENDMENTS TO THE CLAIMS

A. Rejections pursuant to 35 USC § 112, second paragraph

In the Office Action claim 226 was rejected as allegedly failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Appropriate amendments have been made to claim 226. Applicants contend that claim 226 comports with the provisions of 35 USC § 112, second paragraph.

B. Rejections Pursuant to 35 USC § 102 & 35 USC § 103

In the Office Action, specified claims were rejected as allegedly being anticipated pursuant 35 USC § 102(b) by *Scire et al.* To summarize the standard, “[a] claim is anticipated only if each and every element as set forth in the claim is found, either

expressly or inherently described, in a single prior art reference.” *Verdegaal Bros., Inc. v. Union Oil Co. of California*, 814 F.2d 628 (Fed. Cir. 1987), citing, *Structural Rubber Prods. Co. v. Park Rubber Co.*, 749 F.2d 707, 715, 223 U.S.P.Q. 1264, 1270 (Fed. Cir. 1984); *Connell*, 722 F.2d at 1548, 220 U.S.P.Q. at 198; *Kalman v. Kimberly-Clark Corp.*, 713 F.2d 760, 771, 218 U.S.P.Q. 781, 789 (Fed. Cir. 1983), cert. denied, 465 U.S. 1026, 104 S.Ct. 1284, 79 L.Ed.2d 687 (1984). In the instant matter, claims 1, 31, 212, 226 and 227 were amended to more clearly distinguish the claimed invention from the cited prior art. All remaining amendments were made to ensure that the claims comport with the requirements of 35 USC § 112 and/or to more clearly define the invention and were not necessitated to overcome material information, prior art or otherwise. Applicants do not believe that new subject matter has been introduced by these amendments. In addition to addressing the anticipation rejection, Applicants address an inchoate obviousness rejection, as well.

(i) Claim 1

Amended Claim 1 defines an apparatus for positioning of an object in at least one plane that includes, *inter alia*, a linkage coupled to a holder, defining a first joint thereat, with the first joint being coupled to a second joint through a plurality of elongated members and a flexure joint, with the plurality of elongated members being coupled to the flexure joint to move at substantially the same rate and in opposite directions to facilitate movement of the holding member along first and second axes. Applicants advocate this configuration to ensure pure translational motion along an axis. See ¶ [0147]. Specifically, the first joint 1807 is serially coupled to ground 1806 through linkages 1906 and 1908 and cylindrical discs 1902.

Scire et al. on the other hand, in Fig. 5 and the corresponding text, is completely silent with respect to having multiple flexure arms connected with a first joint and a second joint as recited in claim 1. This is shown by only one flexure arm, such as

arms 14, 15, 16 and 17 extending between each first joint and ground. Moreover, assuming *arguendo* that either pair of flexure arms, such as 14 and 16 or 15 and 17, is analogous to the claimed flexure arms, *Scire et al.* teach that each of the flexures arms associated with one of the aforementioned pairs is to move in a substantially identical manner. See col. 5, lines 22-26. It is believed that *Scire et al.* advocates this configuration due to the parallel attachment between ground and the stage 13 of the flexure arms associated with each pair. This is distinguishable from applicants construction which is a serial attachment of the pair of elongated members coupled between ground and the holder. It is contended that without applicants serial attachment of elongated members *Scire et al.* does not suggest having elongated members being coupled to the flexure joint to move at substantially the same rate and in opposite directions to facilitate movement of the holding member along first and second axes, as claimed.

Furthermore, none of the remaining cited prior art overcome the deficiencies of *Scire et al.* Therefore, Applicants respectfully contend that a *prima facie* case of obviousness is not present with respect to claim 1, as amended.

(ii) Claim 31

Amended claim 31 defines an apparatus for positioning of an object along a first axis and a second axis including, *inter alia*, a first set of flexure linkages coupled to a platform, defining a plurality of first joints thereat. Each of the first joints is coupled to a second joint through a first pair of elongated members and a first flexure joint so as to facilitate movement of the first pair of elongated members in opposing directions while facilitating movement of the platform along a first axis. A second set of flexure linkages is coupled to the platform. The second set of flexure linkages define a plurality of third joints, with each of the third joints being coupled to a fourth joint through a second pair of elongated members and a second flexure joint so as to facilitate movement of the

second pair of elongated members in opposing directions while facilitating movement of the platform along a second axis.

Applicants contend that the arguments set forth with respect to claim 1 apply with equal weight to amended claim 31. Therefore Applicants respectfully contends that a *prima facie* case of obviousness is not present with respect to claim 31, as amended.

(iii) Claim 212

Claim 212 has been amended to define an apparatus for positioning of an object in a plane that includes, *inter alia*, a holding member retaining an object, a linkage coupled to the holding member, defining a first joint thereat, with the first joint being coupled to ground through a plurality of elongated members and a flexure joint. The plurality of elongated members is coupled to the flexure joint to move in opposite directions to facilitate movement of the holding member along an axis in response to movement of the holding member by the motive device.

Applicants contend that the arguments set forth with respect to claim 1 apply with equal weight to amended claim 212. Therefore Applicants respectfully contends that a *prima facie* case of obviousness is not present with respect to claim 212, as amended.

(iv) Claim 226

Amended claim 226 defines an apparatus for positioning an object in a plane that includes, *inter alia*, a holding member configured to retain an object and a plurality of flexure linkages coupled to the holding member, defining a first joint thereat coupled to a ground through a pair of elongated members and a rolling contact joint, with the rolling contact joint and the pair of elongated members being coupled to constrain movement of the holding member within a predetermined range of motion by the pair of elongated members moving in opposite directions and at substantially the same rate.

Applicants contend that the arguments set forth with respect to claim 1 apply with equal weight to amended claim 226. Therefore Applicants respectfully contends that a *prima facie* case of obviousness is not present with respect to claim 226, as amended.

(v) Claim 227

Claim 227 has been amended to define system for forming a pattern on a substrate that includes, *inter alia*, a first axis positioning system, wherein the first axis positioning system comprises a first set of flexure linkages coupled to the holding member defining a first set of first joints thereat. Each of the first joints of the set is connected to ground through a first rolling contact joint and a first pair of elongated members. The first rolling contact joint and the first pair of elongated members are coupled to the holding member to constrain movement of the holding member to a substantially linear motion along a first axis by the first pair of elongated members moving in opposite directions and at substantially the same rate. A second axis positioning system is included. The second axis positioning system comprises a second set of flexure linkages coupled to the holding member, defining a second set of second joints thereat. Each of the second joints of the second set is connected to ground through a second rolling contact joint and a second pair of elongated members. The second rolling contact joint and the second pair of elongated members are coupled to the holding member to constrain movement of the holding member to a substantially linear motion along a second axis by the second pair of elongated members moving in opposite directions and at substantially the same rate.

Applicants contend that the arguments set forth with respect to claim 1 apply with equal weight to amended claim 227. Therefore Applicants respectfully contends that a *prima facie* case of obviousness is not present with respect to claim 227, as amended.

III. THE NON-OBVIOUSNESS OF THE DEPENDENT CLAIMS

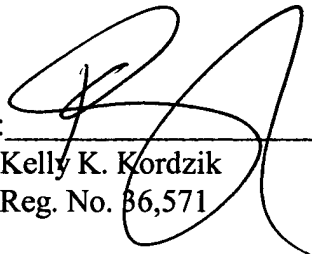
Considering that the dependent claims include all of the features of the independent claims from which they depend, these claims are patentable to the extent that the independent claims are patentable. Therefore, Applicant respectfully contends that the dependent claims defined system suitable for patent protection.

Applicants respectfully request examination in view of the remarks. A notice of allowance is earnestly solicited.

Respectfully submitted,

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